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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,753	02/03/2004	Jae-hwan Yoo	1349.1218 CIP	8928
21171	7590	08/02/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			MARTINEZ, CARLOS A	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/769,753

Applicant(s)

YOO, JAE-HWAN

Examiner

Carlos A. Martinez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification corrections were received on 06/29/2006. It is noted that these corrections are acceptable.

Claim Objections

2. Claim 8 is objected to because of the following informalities: "direction of the laser beam. a movable member" (note: typographical error of a period should be corrected between "beam" and "a"). Appropriate correction is required.

Priority

3. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 10/437185, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. As Figure 10 in the current application (10/769753) is not found in the prior application, the claims in the current application are not entitled to the benefit of the filing date of the prior application.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1,4-7, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 5, 6, 8, and 9, the meaning of “laser beam” is indefinite in relation to the “multi-beam laser” and “a plurality of laser sources”. As written, the claim language seems to render the invention toward more than “a laser beam” since “a plurality of laser sources” are referred to in the present claim(s). Since “a laser beam” would normally suggest to one skilled in the art a single source from which the beam was derived, it is uncertain to the Office – according to the claim language – whether the “laser beam” is being claimed to be equivalent to a reference to multiple beams considered as a single/whole entity or just as a reference to a single beam from a single source. Therefore, as the claim language is indefinite to the Office, for the purpose of examination these claims will be interpreted to have “laser beam” to refer to multiple beams considered as a single/whole entity and equivalent to the expression “laser beams”.

Since claims 4 and 7 are dependent on a rejected parent claim they are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 4, and 9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 36-38 of U.S. Patent No. 7050083B2 in view of JP2003344796. Although the conflicting claims are not identical, they are not patentably distinct from each other because the listed claims (36-38) together include all the structure found in claims 1 and 9 of the present invention.

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Claims 36-38 of U.S. Patent No. 7050083B2 recites the structure of a multi-beam laser scanning unit for scanning a laser beam onto a photoreceptor medium, comprising: a plurality of laser sources emitting a laser beam; a polygon mirror deflecting the laser beam; a f-theta. lens focusing the deflected laser beam onto the photoreceptor medium; a movable member for varying the height of the transparent member with respect to the plurality of laser sources, and where the transparent member has an inclined lower side inclined with respect to a scanning direction of the laser beam, and the movable member has an inclined surface inclined with respect to the inclined lower side of the transparent member, and the transparent member having a thickness varying depending on a height thereof perpendicular to a direction where the laser beam passes through the transparent member.

However, claims 36-38 fail to recite a collimating lens converting the laser beam into a parallel ray and a transparent member disposed between the f-theta. lens and the photoreceptor medium. Though this is the case, JP2003344796 recites a collimating lens (refer to element 38 of Fig. 3 and Fig. 4) and a transparent member (refer to abstract and element 1) disposed between the f-theta. lens (refer to element 32) and the photoreceptor medium (refer to element 2).

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify the invention of U.S. Patent No. 7050083B2 to include a collimating lens converting the laser beam into a parallel ray and a transparent member disposed between the f-theta. lens and the photoreceptor medium, as taught by JP2003344796, for the purpose of

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providing a configuration of lens positioning familiar to those skilled in the art and for providing parallel beams.

Further with respect to claim 4, since claim 4 is dependent on a rejected parent claim it is also rejected on the ground of nonstatutory obviousness-type double patenting.

8. Claims 5 and 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 36-38 of U.S. Patent No. 7050083B2 in view of JP2003344796, as applied to claim 1 above, and further in view of Appel (US5153768) and *Graham v. John Deere Co.*, 383 US 1, 148 USPQ159 and *In re Dailey*, 149 USPQ 47 (CCPA 1976). Although the conflicting claims are not identical, they are not patentably distinct from each other because the listed claims (36-38), JP2003344796, Appel (US5153768) and *Graham v. John Deere Co.*, 383 US 1, 148 USPQ159 and *In re Dailey*, 149 USPQ 47 (CCPA 1976) together include all the structure found in claims 5 and 6 of the present invention.

Claims 36-38 of U.S. Patent No. 7050083B2 (in view of JP2003344796) recites a multi-beam laser scanning unit and a transparent member.

However, claims 36-38 (in view of JP2003344796) fail to recite a transparent member that has a triangular or a trapezoidal cross-section in the direction where the laser beam passes through the transparent member. Though this is the case, Appel (US5153768) teaches a transparent member that has a triangular cross-section in the direction where the laser beam passes through the

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transparent member (refer to element 40 of Fig. 1 and lines 12-17 of column 3). Further, with respect to a trapezoidal cross-section, it would have been obvious to utilize a trapezoidal cross-section since it has been held that a particular configuration is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing a cross-section that would allow for varying refraction due to a varying thickness, see *Graham v. John Deere Co.*, 383 US 1, 148 USPQ159 and *In re Dailey*, 149 USPQ 47 (CCPA 1976).

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify the invention of U.S. Patent No. 7050083B2 (in view of JP2003344796) with a transparent member that has a triangular or a trapezoidal cross-section in the direction where the laser beam passes through the transparent member, as taught by Appel and *Graham v. John Deere Co.*, for the purpose of providing a cross-section that will allow for varying refraction due to a varying thickness.

9. Claim 7 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 36-38 of U.S. Patent No. 7050083B2 in view of JP2003344796, as applied to claim 1 above, and further in view of Takanashi (US4756584). Although the conflicting claims are not identical, they are not patentably distinct from each other because the listed claims (36-38), JP2003344796, and Takanashi (US4756584) together include all the structure found in claim 7 of the present invention.

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Claims 36-38 of U.S. Patent No. 7050083B2 (in view of JP2003344796) recites a multi-beam laser scanning unit and a transparent member.

However, claims 36-38 (in view of JP2003344796) fail to recite where the transparent member has an optical refractivity of at least 1; however, it should be known to ones skilled in the art that lenses/prisms, which are typically made of plastic or glass, would have an index of refraction that is greater than 1. Though this is the case, Takanashi teaches a transparent member that has an optical refractivity of at least 1 (refer to example 1 and lines 6-20 of column 6; specifically element 7 of Fig.1 which corresponds to n_3).

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify the invention of U.S. Patent No. 7050083B2 (in view of JP2003344796) with a transparent member that has an optical refractivity of at least 1, as taught by Takanashi, for the purpose of being able to produce a refraction of light due to the utilization of a medium with a refractive index of at least 1, where it is known that the commonly accepted index of refraction for air is 1.

10. Claim 8 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 36-38 of U.S. Patent No. 7050083B2 in view of JP2003344796. Although the conflicting claims are not identical, they are not patentably distinct from each other because the listed claims (36-38) together include all the structure found in claim 8 of the present invention.

Claims 36-38 of U.S. Patent No. 7050083B2 recite the structure of an image forming apparatus/multi-beam laser scanner, comprising: a transparent member, having a thickness varying depending on a height thereof perpendicular to a direction of the laser beam as the laser beam passes through the transparent member, and having an inclined lower side inclined with respect to a scanning direction of the laser beam, a movable member having an inclined surface inclined with respect to the inclined lower side of the transparent member and varying the height of the transparent member with respect to sources of the laser beam.

However, claims 36-38 fail to recite a transparent member disposed between an $f-\theta$ lens and a photoreceptor medium. Though this is the case, JP2003344796 recites a transparent member (refer to abstract and element 1) disposed between the $f-\theta$ lens (refer to element 32) and the photoreceptor medium (refer to element 2).

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify the invention of U.S. Patent No. 7050083B2 to include a transparent member disposed between an $f-\theta$ lens and a photoreceptor medium, as taught by JP2003344796, for the purpose of providing a configuration of lens positioning familiar to those skilled in the art.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos A. Martinez whose telephone number is (571) 272-8349. The examiner can normally be reached on 8:30 am - 5:00 pm (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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07/24/2006


HAI PHAM
PRIMARY EXAMINER